

Opportunity Title: CDC Molecular Pathology Training Fellowship with Infectious Disease Pathology Branch - COVID

Opportunity Reference Code: CDC-NCEZID-DHCPP-2023-0020

Organization Centers for Disease Control and Prevention (CDC)

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A complete application consists of:

- An application
- Transcripts – [Click here for detailed information about acceptable transcripts](#)
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- One educational or professional recommendation. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted.

All documents must be in English or include an official English translation.

Application Deadline 3/24/2023 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.

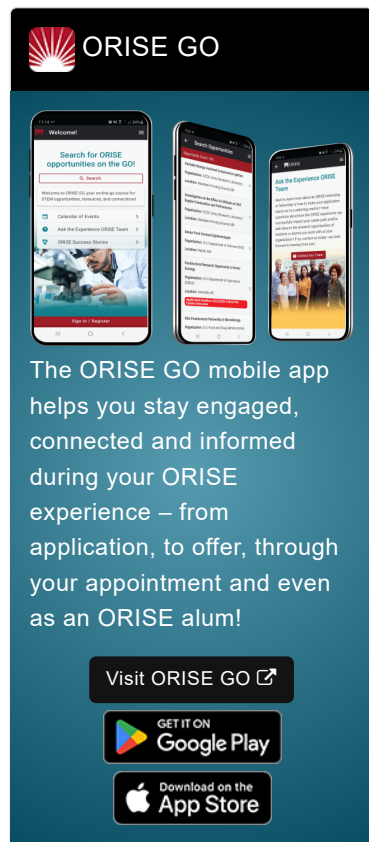
CDC Office and Location: A research opportunity is currently available in the Infectious Diseases Pathology Branch (IDPB) within the Division of High Consequence Pathogens and Pathology (DHCPP) of the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia.

The Centers for Disease Control and Prevention (CDC) is one of the major operation components of the Department of Health and Human Services. CDC works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

Research Project: The IDPB is the primary CDC program to provide tissue-based diagnosis of infectious diseases. The participant will be trained in the optimization and validation of molecular diagnostic assays, including conventional and digital droplet PCR/RT-PCR, pyrosequencing, and in-situ hybridization (ISH) assays for the identification of wide-range of pathogens, including various bacteria and viruses, from formalin-fixed, paraffin embedded (FFPE) tissues.


The overall goal of the project is to develop advanced molecular detection assays/technologies for rapid and cost-effective identification of a wide-array of pathogens in fixed tissues. The research will greatly enhance the diagnostic capacity of the Infectious Diseases Pathology Branch (IDPB) and speed up public health response by quickly identifying etiologic pathogens in cases associated with outbreaks, epidemiologic investigations, and in unexplained deaths.

Learning Objectives: The selected participant will gain experience by learning novel diagnostic techniques for tissue analysis, to conduct



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research on diverse pathogens using various cutting-edge molecular techniques and to study disease pathogenesis. More specifically, the participant will receive training to:

- Perform tissue-based conventional PCR/RT-PCR, pyrosequencing and Sanger sequencing for detection and characterization of wide array of pathogens
- Perform digital droplet PCR/RT-PCR protocols using QIAcuity system
- Perform nucleic acid extractions from paraffin embedded tissue specimens and assists in performing optimization and validation of pathogen-specific pyrosequencing protocols/assays and learn about validation procedures
- Perform ISH assays to localize the pathogens directly in the tissue to compare with other tissue-based methods
- Learn to prepare and submit CLIA and non-CLIA assay validation documents
- Learn to perform review of literature related to the project and assist in data compilation

All the above-mentioned activities will be performed under the guidance of the Molecular Pathology Team Lead.

Mentor(s): The mentor(s) for this opportunity is Julu Bhatnagar, Ph.D., Molecular Pathology Team Lead (zrn1@cdc.gov). Please contact them if you have questions about the nature of this research.

Anticipated Appointment Start Date: February 1, 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of CDC and is contingent on the availability of funds.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **A health insurance allowance will be provided; Relocation allowance will not be provided; Travel/training allowance will not be provided.**

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and CDC. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

The successful applicant(s) will be required to comply with Environmental,

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Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).


Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process please email ORISE.CDC.NCEZID@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a bachelors, master's, or doctoral degree in one of the relevant fields. Most recent degree must have been received in the past five years.

Preferred Skills:

- Experience and proficiency in using various molecular biology techniques, including DNA/RNA extractions, PCR/RT-PCR, gel electrophoresis, gel purification and some experience in sequencing techniques
- Experience and proficiency in sequence and data analysis software, scientific database search tools and reference management programs
- Experience in working with tissue samples

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Life Health and Medical Sciences** ([48](#) )

Affirmation I certify that I have not previously been employed by CDC or by a contractor working directly for CDC. I understand that CDC does not permit individuals with a prior employment relationship with CDC or its contractors to participate as trainees in the ORISE program. (Exceptions may be granted for individuals who, since the previous CDC employment, have obtained a new STEM degree which necessitates training in a new field.)